

Assessing Aggressivity with the Comprehensive System-Revised, Part I: The Rorschach Gacono & Meloy Extended Aggression Scores: An Updated Review

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Abstract

Determining a patient's aggressivity is a function of assessing multiple factors, including personality vulnerabilities, past behaviors, and potential future circumstances. Evaluating the nature and predominance of aggressive drive, impulse control, affect lability, inhibitory mechanisms, cognitive deficits, and conscious and unconscious attitudes (e.g., use of devaluation; the presence of internal identifications and imagery) is essential. All of these issues have correlates in the Comprehensive System (CS; Exner, 2003; also CS-R; Fontan & Andronikof, 2022) and supplemental Rorschach data (primitive defenses: Cooper et al., 1988; Lerner & Lerner, 1980; object relations phenomena: Kwawer, 1980; extended aggression scores: Gacono & Meloy, 1994). Pre-Oedipal personality organization and primitive object relations also imply attitudes toward others that are derogatory or distorted (all linked to aggressivity; Rose & Bitter, 1980). Coding of aggressive Rorschach imagery is essential but insufficient in understanding aggressivity. Part I of this two-article series discusses the origins, development, reliability, and validity of Gacono & Meloy's Extended Aggression Scores (AgScores, 1994; Aggressive Content [AgC], Aggressive Past [AgPast], Aggressive Potential [AgPot], Aggressive Vulnerability [AgV], and Sado-Masochism [SM]; see also Gacono & Smith, 2022).

Introduction

Aggressivity is a function of a patient's personality vulnerabilities, past behaviors, and foreseeable future circumstances. Its assessment necessitates an analysis of personality factors that include the nature and predominance of aggressive drive, impulse control, affect lability, inhibitory mechanisms, cognitive deficits, and conscious and unconscious attitudes (i.e., use of devaluation, and the presence of internal identifications and imagery; see Yakeley & Meloy, 2012), all of which have correlates in the Comprehensive System (CS: Exner, 2003; also CS-R: Fontan & Andronikof, 2022) and supplemental Rorschach data (Gacono & Smith, 2022). For example, $CF + C > FC + 1$ has been linked to emotional lability, while $C > 2$ is associated with explosiveness (Exner, 2003). $X\%$ and $WSum6$ are associated with cognitive deficits (perceptual accuracy and slippage, respectively). A reliance on primitive defenses (Cooper et al., 1988; Lerner & Lerner, 1980) and the presence of primitive object relations phenomena (Kwawer, 1980) suggest immature levels of personality organization and imply attitudes toward others that are derogatory or distorted (PHR; Hilsenroth et al., 1993; Rose & Bitter, 1980). Coding of aggressive Rorschach imagery (Gacono & Meloy, 1994) is also essential but insufficient for assessing aggressivity.

Part I of this two-part series provides an overview of Gacono & Meloy's Extended Aggression (Ag) scores (1994; AgC, AgPast, AgPot, AgV, & SM) and discusses their origins, development, reliability, and validity. In Part II, we provide a framework for the Rorschach assessment of aggressivity utilizing the Gacono Aggressivity Cluster (GAC; CS-R¹; Fontan & Andronikof, 2022).

The Extended Aggression Scores

Along with Tom Heaven (Gacono, 1988; Heaven, 1989; doctoral dissertations), Gacono (1988, 1990) observed that antisocial personality disorder (ASPD) and psychopathic males produced few AG movement responses (AGM; Exner, 2003) as compared to Exner's (1995) presumably nonviolent nonpatients (Heaven, 1989). During interviews, these incarcerated offenders openly relayed their violent acts with bravado, making it improbable that they would, subsequently, selectively censor AGM, while at the same time producing high quantities of all other aggressive imagery. These offenders were mostly adjudicated, negating possible external rewards for selectively censoring AGM (Exner, 1993; Gacono & Meloy, 1994; Meloy, 1988).

This pattern of antisocial, violent, and psychopathic groups producing few AGM responses is not new. It has been reported in past studies and replicated in current ones (Domjan, 2018; Franks et al., 2009). Similar patterns extend to Conduct Disorder (CD) in children and adolescents, who frequently produce aggressive imagery and sexual content (Gacono, 1997; Gacono & Meloy, 1994; Gacono et al., 2008).

Early research (Elizur, 1949; Holt & Havel, 1960; Rapaport et al., 1946, 1968; Schafer, 1954) offered data suggesting that the discrepancies between the production of AGM and interview/historical data might be explained by a lack of *internal tensions* related to aggressive impulses (represented by Exner's AGM; Elizur, 1949; Rapaport et al., 1946, 1968). Consequently, the paucity of Rorschach AGM could be attributed to the ego-syntonic nature of aggression in Antisocial Personality Disorder (ASPD) and psychopathic subjects. Rather than struggling with (binding) aggressive impulses, these violent individuals would act them out².

In a complementary fashion, the distress caused by aggressive impulses in nonpatients and neurotics would be symbolized on the Rorschach in the form of AGM. This relationship is supported by Exner's (1995) character disordered sample, which produced lower AGM frequencies than adult nonpatients; by violent children and adolescents producing lower AGM frequencies than the child and adolescent nonpatients (also see Crain & Smoke, 1981); and by the majority of the forensic subjects with known histories of violence producing less AGM than nonpatients and clinical samples without histories of violence³ (Gacono, 1997; Gacono & Meloy, 1994; Gacono et al., 2008; Smith et al., 2021b).

¹ The Comprehensive System-Revised (Exner et al., 2022) includes a Supplemental Scoring Handbook, which has a discussion of the GAC (*The Rorschach: A Comprehensive System-Revised Supplemental Scoring Handbook*; Smith et al., 2022).

² Rather than producing AGM (internal conflict/ambivalence), these individuals would symbolize their aggressive drive through AgC (identifications). AGM is similar to Holt's (1977) A2 secondary process score (more mature levels of aggressive drive), while more primitive Aggression Scores like AgPast are akin to Holt's A1 primary process score.

³ Compared to other forensic samples, higher rates of AGM among the sexual homicide perpetrators is consistent with their ambivalent relationship to the impulse.

Despite the paucity of AGM in ASPD subjects, other aggressive imagery appeared in abundance. Gacono observed multiple categories of imagery (Gacono, 1988, 1990) which led to the development (Gacono, 1988, 1990) and refinement (Meloy & Gacono, 1992; Gacono & Meloy, 1994) of five additional scoring categories: AgC, AgPast, AgPot, AgV, and SM. Gacono and Meloy (1994) were not the first, and hopefully not the last, to study, classify, and attempt to link Rorschach aggressive imagery to real-world behavior (Devos, 1952; Elizur, 1949; Finney, 1955; Holt, 1977; Lindner, 1946; Rose & Bitter, 1980; Sommer & Sommer, 1958; Storment & Finney, 1953). Nor were they the first to advocate for classifying aggressive content and expanding its coding (Schafer, 1954). However, their work has been credited with creating a resurgence of interest in the topic (de Ruiter, 2021) and has been viewed as the most comprehensive. This work has resulted in one or more of the Extended AgScores being incorporated into the major independent scoring programs, including the current revision of the Comprehensive System (also, CHESSSS [Fontan et al., 2013]; ROR-SCAN Version 6 Rorschach Interpretive Scoring System [Caracena, 2002]; Rorschach Performance Assessment System [R-PAS; Meyer et al., 2011]).

Methods

A search of PsycINFO between 1989 (AgScores were introduced in Gacono, 1988) and 2003 using the keywords *Rorschach* and *aggressive, aggression, AgC, AgPot, AgPast, sadomasochism, sado-masochism, Gacono, or Meloy*, revealed eight published articles (Gacono, 1990; Gacono et al., 1992; Meloy & Gacono, 1992; Baity & Hilsenroth, 1999; Baity & Hilsenroth, 2002; Kamphuis et al., 2000; Mihura & Nathan-Montano, 2001; Mihura et al., 2003) and 12 dissertations (additional dissertations came from other searches) that have included one or more of the Extended AgScores (Gacono et al., 2008). A similar analysis between 2004 and 2022 produced 15 additional published articles (Domjan, 2018; Benjestorf et al., 2013; Huprich et al., 2004; Joubert & Webster, 2017; Kivisto & Swan, 2013; Kochinski et al., 2008; Liebman et al., 2005; Nørbech et al., 2016; Rosso et al., 2015; Rovinski et al., 2018; Schug, 2021; Smith et al., 2020, 2021b; Smith et al., 2019; Weizmann-Henelius et al., 2006) and two dissertations (Dehass, 2014; Kiss, 2017).

Inter-rater Reliability

Table 1 summarizes the inter-rater reliability for the Gacono and Meloy Extended Aggression Scores from 25 sources. Twelve studies lacked inter-rater reliabilities and were excluded from the table. Percent agreement means ranged from 50% (AgPot) to 99.6% (SM). One outlier, 50% for AgPot (White, 1999), lowered the mean scores. Combined mean for kappa coefficients and intraclass correlation coefficients (ICCs) ranged from 0.64 (AgPast) to 1.0 (AgPot) which is considered good to excellent (i.e., > .60; Fleiss, 1981).

Validity Research

AgC has been the most frequently researched score (36 studies), followed by AgPast (28 studies), then AgPot (27 studies). Eight studies investigated SM, and two studies investigated AgV. The following section describes each Extended AgScore and summarizes the extant validity research.

Table 1
Inter-rater Agreement for the Rorschach Extended Aggression Scores

Study	<i>N</i>	AgC	AgPot	AgPast	SM	AgV	Sample Studied
Baity & Hilsenroth (1999)	25	99% (.95) ^a	100% (1.0) ^a	99% (.79) ^a	N/A	N/A	Cluster A, B, & C Personality Disorders
Baity & Hilsenroth (2002)	20	.88 ^a	N/A	N/A	N/A	N/A	Psychiatric reference groups from Exner's (1993) normative sample
Benjestorf et al. (2013)	40	.92 ^a	.85 ^a	.82 ^a	N/A	N/A	Violent offenders and non-offenders
Cohan (1998)*	20	86%	83%	88%	N/A	N/A	Forensic outpatient sex offenders
Darcangelo (1997)*	5	.97 ^b	.92 ^b	.95 ^b	N/A	N/A	Male incarcerated rapists
Dehass (2014)*	32	.89 ^a	N/A	N/A	N/A	N/A	Children and adolescents in a residential treatment center
Gacono et al. (1992)	30	95%	100%	96%	N/A	N/A	Cluster B/Personality Disorders
Hartmann et al. (2006)	19	.84 ^b	.88 ^b	.93 ^b	N/A	N/A	Psychopathic and nonpsychopathic violent inpatients
Huprich et al. (2004)	19	97% (.90) ^a	99% (.83) ^a	99% (.89) ^a	99% (.91) ^a	N/A	Psychopaths, pedophiles, sexual homicide perpetrators
Joubert & Webster (2017)	108	.78	N/A	.85	N/A	.83	Community children and adolescents
Kiss (2017)*	20	.85 ^b	N/A	N/A	N/A	N/A	Undergraduate students and forensic inpatients
Kivisto & Swan (2013)	28	.72 ^a	1.0 ^a	.89 ^a	N/A	N/A	Undergraduate students
Kochinski et al. (2008)	20	.93 ^a	N/A	.70 ^a	N/A	N/A	Self-mutilating and nonself-mutilating adolescent inpatients
Levy (1998)*	14	93%	97%	98%	N/A	N/A	Physically abused children
Liebman et al. (2005)	150	.82 ^a	N/A	.87 ^a	N/A	N/A	Adjudicated, mostly conduct disordered adolescents
Meloy & Gacono (1992)	30	95%	100%	96%	N/A	N/A	ASPD incarcerated males
Mihura & Nathan (2001)	50	.85 ^a	.76 ^a	.85 ^a	N/A	N/A	Undergraduate college students
Mihura et al. (2003)	70	.89 ^a	.88 ^a	.94 ^a	N/A	N/A	Undergraduate college students
Neubauer (2001)*	20	95% (.80) ^a	100% (.66) ^a	98% (.65) ^a	N/A	N/A	Non-patient adults
Nørbech et al. (2016)	20	.94 ^b	1.0 ^b	.92 ^b	.96 ^b	N/A	Incarcerated debt collectors
Riquelme et al. (1991), Ephriam et al. (1993)**	40	N/A	97%	97%	N/A	N/A	Venezuelan nonpatient adults
Rosso et al. (2015)	50	.93 ^a	1.0 ^a	.97 ^a	N/A	N/A	Undergraduate students
Rovinski et al. (2018)	31	.84 ^b	N/A	N/A	N/A	N/A	Men with violence against women
Smith et al. (2020)	20	97% (.90) ^a	100% (.91) ^a	100% (.98) ^a	100% (.93) ^a	N/A	Incarcerated women
White (1999)*	33	79%	50%	86%	N/A	N/A	Forensic outpatients

Note. *N* = number of protocols scored for inter-rater agreement

^a Kappa coefficients (*k*)

^b Intraclass correlations (ICC)

* Dissertation

** Published book

Aggressive Content (AgC). AgC is coded for content popularly perceived as predatory, dangerous, malevolent, injurious, or harmful (Gacono, 1988; Meloy & Gacono, 1992):

Example 1: (Card VI; Dd99) “It’s a gun (code AgC).”

Example 2: (Card IX; D3) “It’s a demon with claws” (code AgC).

Example 3: (Card X) “A dragon attacking a demon (code AgC, AgC, AGM).”

Popular responses are not coded as AgC unless embellished with additional aggressive imagery (i.e., Card V "a bat" [not AgC]; "A vampire bat" (code AgC). A "tiger" (popular) to D1 on Card VIII is not scored as AgC. If the tiger is embellished with additional aggressive imagery (e.g., a tiger with sharp teeth and claws), it is scored as AgC. The popular *bat* response (Card V) is not coded as AgC, while a *vampire bat* or *bat with sharp teeth* would be. The original definition of AgC allowed for multiple occurrences of AgC within a single response to receive several AgC scores (i.e., two different AgC objects would receive two AgC scores). This multiple coding occurred so infrequently that only one AgC is allowed per response in the CS-R.

Gacono’s surveys of mental health workers and college students were used as the basis for AgC scoring guidelines (see Table 2; Gacono & Meloy, 1994; Meloy & Gacono, 1992). An alternate guide was formed by surveying a college group (Baity et al., 2000). Baity et al. (2000) also divided AgC into objects (weapons, animal/part animal, environmental danger, and fictional creatures) and adjectives (scary, frightening, evil, angry, or mean). The Baity et al. (2000) research supported the validity of the original AgC guidelines and provided a measure of a one-month test-retest reliability check ($r = .99$). Neither list is inclusive, and both serve as guides for AgC scoring.

Interpretation: AgC represents identifications or preoccupations with aggressive objects and, in certain cases, highly cathected object representations of weapons or violent acts (Gacono & Meloy, 1994). In disordered personality outpatients, AgC predicted the total number of *Diagnostic and Statistical Manual for Mental Disorders-IV* (DSM-IV; American Psychiatric Association [APA], 1994) criteria for Antisocial Personality Disorder (ASPD) and scores on the MMPI-2 Antisocial Practices Scale (APS; Butcher et al., 1989; see Baity & Hilsenroth, 1999). AgC also predicted aggressive behavior in adjudicated adolescents (Liebman et al., 2005) and has been found in the Rorschach protocols of men with violence against women and imprisoned violent male psychopaths (Hartmann et al., 2006; Rovinski et al., 2018).

Elevated AgC and AGM scores have been associated with higher general and sexual aggression ratings for incarcerated male rapists (Darcangelo, 1997). In forensic psychiatric patients, the combination of AgC and AgPot is linked to predicting violent behavior (Domjan, 2018). Female sex offenders produce more AgC than nonviolent male pedophiles (Smith et al., 2019; Smith & Gacono, 2021), while psychopathic women produce significantly more than nonpsychopathic women (Smith et al., 2020, 2021b). The AgC score also has been significantly correlated to victimization in childhood and suicide attempts for incarcerated violent women (Weizmann-Henelius et al., 2006).

Table 2
Rorschach Content Popularly Perceived as Aggressive (from Gacono & Meloy, 1994)

Content	Ratings				Content	Ratings			
	Students (<i>n</i> = 31)		MHP (<i>n</i> = 32)			Students (<i>n</i> = 31)		MHP (<i>n</i> = 32)	
	Frequency	%	Frequency	%		Frequency	%	Frequency	%
Arrow	21	68	25	78	Mummy	16	52	16	50
Axe	20	67	29	91	Monster	25	81	28	88
Barracuda	24	77	17	53	Mushroom Cloud (Explosion)	28	90	28	88
Bat	15	48	17	53	Needle	15	48	20	63
Battleship	22	71	24	75	Noose	20	64	21	66
Beast	20	67	18	56	Nuclear Cloud	26	84	27	84
Blade	22	71	28	88	Nuclear Warhead	31	100	32	100
Black Widow Spider	27	87	32	100	Panther	14	45	23	72
Bomb	26	84	31	97	Pick	11	36	16	50
Bullet	29	93	30	94	Pincers	18	58	23	72
Cage	18	58	11	34	Rats	10	32	19	59
Claws	23	74	26	81	Rattlesnake	27	87	31	97
Club	10	32	22	69	Rifle	23	74	32	100
Cobra	25	81	31	97	Saw	16	52	14	44
Cockroach	17	55	12	38	Scorpion	26	84	30	94
Copperhead	22	71	26	81	Shark	26	84	28	88
Crocodile	14	45	24	75	Sharp Teeth	20	64	23	72
Demon	29	93	26	81	ShotGun	28	90	32	100
Devil	27	87	30	94	Sledgehammer	20	64	21	66
Devil's Sign	23	74	26	81	Snake	17	55	25	78
Dive Bomber	15	48	28	88	Spear	20	64	27	84
Dracula	25	81	30	94	Spider	16	52	16	50
Dragon	22	71	20	63	Spike	16	52	16	50
Explosion	31	100	31	97	Sticker Bush	21	68	23	72
Fangs	22	71	31	97	Syringe	15	48	21	66
Fire	19	61	25	78	Tarantula	24	77	32	100
Fist	13	42	23	72	Tiger	14	45	24	75
Forest Fire	23	74	29	91	Tire Iron	5	16	19	59
Frankenstein	18	58	27	84	Tomahawk	21	68	26	81
Garrote	3	10	25	78	Tornado	27	87	26	81
Goblins	17	55	17	53	Torpedo	27	87	30	94
Gun	25	81	27	84	Torch	16	52	18	56
Hammer	5	16	18	56	Vampire	26	84	30	94
Hatchet	25	81	26	81	Vampire Bat	25	81	28	88
Hurricane	29	93	27	84	Venus Fly Trap	6	19	16	50
Jackal	12	39	16	50	Volcano (erupting)	31	100	28	88
Jellyfish	17	55	13	41	Volcano	21	68	24	75
Killer Whale	14	45	25	78	Wasp	23	74	24	75
King Kong	16	52	17	53	Water Moccasin	21	68	27	84
Knife	28	90	32	100	Wolf	13	42	21	66
Lion	12	39	22	69	Wolfman	19	61	27	84
Missile	28	90	27	84	Yellowjacket	21	68	19	59
Medusa	24	77	21	66					

Note. MHP = mental health professionals. The above content was selected from a sample of 240 objects listed in the Exner Workbook (Exner, 1985) and 40 additional objects identified in Rorschach protocols of psychopathic individuals. The items in this table were viewed as aggressive by greater than 50% of at least one of the survey groups.

Baity and Hilsenroth (2002) found that increased behavioral aggressiveness (Aggression Chart Rating Scale; Baity & Hilsenroth, 2002) was significantly correlated with a greater number of AgC, AGM, and Morbid responses (in 94 patients from Exner's 1993 psychiatric reference group). An $AGM \geq 3$ cutoff ruled out non-aggressive chart summaries (specificity = .88 & negative predictive power = .84) but demonstrated a limited ability to identify aggressive behavior (sensitivity = .28 and positive predictive power = .36; Baity & Hilsenroth, 2002). AgC scores ≥ 3 or ≥ 4 improved the ability to identify aggressiveness (sensitivity = .72 and .61, respectively). AGM was more effective in excluding "nonaggressive" histories, while AgC was more effective in identifying "aggressive" histories. Most importantly, AgC was more strongly related to reports of highly aggressive behavior than AGM or MOR (CS; Exner, 2003; see also Liebman et al., 2005).

AgC is interpreted differently in nonviolent, non-forensic populations. In nonpatient women without a criminal history, AgC was related to self-contained anger but not to self-reported physical aggression (Neubauer, 2001), suggesting that it is "a means of sublimating aggressive energy" or an indication of "one's current level of anger." One or two AgC scores have been associated with a relatively "healthy" management of aggression in foster care children with a history of abuse (Joubert & Webster, 2017). In college students, AgC correlated with the Personality Assessment Inventory (PAI; Morey, 1991) Physical Aggression subscale, Borderline Features scale, and its Affective Instability and Identity Problems subscales (Mihura et al., 2003). In these samples, elevated AgC causes disorganization and initiates the defensive use of projection (Mihura & Nathan-Montano, 2001; Mihura et al., 2003), dissimilar to forensic samples, which represent identifications and can help organize personality functioning.

Aggressive Past (AgPast). AgPast is coded for any response in which an aggressive act has occurred, or the object has been the target of aggression (Gacono, 1988):

Example 1: (Card X) "It's a cat that had its head cut-off" (Gacono, 1988, p. 20).

Example 2: (Card I; Dd99) "This is somebody taking a crap or somebody has got something stuck up in them. Drops of blood and somebody might have been emasculated" (AgPast; p. 220, Gacono & Meloy, 1994).

Example 3: (Card IV; W) "It looks like some kind of animal here. Exotic creature, that has been flayed (AgPast). Like you would find on another planet like a bear rug." (p. 178, Gacono & Meloy, 1994).

MOR responses and AgPast (Baity & Hilsenroth, 1999) are related but not synonymous. While most AgPast responses are coded MOR, morbid responses without aggressive connotations are not scored AgPast (e.g., "it's a sad person."). Morbid responses have been associated with aggression turned against the self (Hilsenroth et al., 1993; Westen, 1990).

Interpretation. AgPast responses suggest masochistic tendencies (Meloy & Gacono, 1992) or victimization-related internal representations (Gacono & Meloy, 1994). Several studies support AgPast representing self-damage, masochism, an early traumatic experience of being victimized, or a behavioral history of self-mutilation (Kochinski et al., 2008). Baity and Hilsenroth (1999) found AgPast, combined with morbid responses and Holt's (1977) primary process variable, loaded (.90) onto a factor labeled "Aggression at Objects." AgPast was also the only significant predictor of scores on the MMPI-2 Anger scale (Baity & Hilsenroth, 1999; p. 106).

Four studies found elevated AgPast in male and female offender groups where an early history of victimization might be expected (Huprich et al., 2004; Smith et al., 2021b; Weizmann-Henelius et al., 2006; White, 1999). Pedophiles were twice more likely to have at least one AgPast than those without the diagnosis (White, 1999), sexual homicide perpetrators produced more

AgPast than *nonviolent* pedophiles (Huprich et al., 2004), and violent male psychopaths produced more AgPast than nonpsychopathic males with a history of violence (Hartmann et al., 2006). Female sex offenders produced significantly more AgPast than a sample of *nonviolent* male pedophiles (Smith & Gacono, 2021; Smith et al., 2019), while female psychopaths had significantly more AgPast than nonpsychopathic females (Smith et al., 2020, 2021b). AgPast was also elevated in a sample of criminal debt collectors (Nørbech et al., 2015). For incarcerated women, the absence of AgPast scores (≤ 1) predicted verbally aggressive misconduct in prison (Smith et al., 2021a).

In female college students, AgPast correlates with several self-report anger scales: contained anger, state anger, and trait anger (Neubauer, 2001) and relates to feelings of frustration, resentment, mistreatment, or suspiciousness. In another college sample, AgPast was associated with interpersonal submissiveness, the PAI Borderline Self-Harm and Negative Relationships subscales (Morey, 1991), and, to a lesser degree, with the Physical Aggression subscale (Mihura et al., 2003). In these nonpatients, AgPast scores may signal a defensive strategy where internalization of one's anger and hostility results in passivity, impulsively motivated self-destructive behavior, and the use of defenses such as projection.

In a study of three nondissociative outpatient groups: 1) those with a history of sexual abuse, 2) those with suspected but unconfirmed sexual abuse, and 3) those with no sexual abuse (Kamphuis et al., 2000), AgPast was significantly correlated with the intensity of violent or sadistic sexual abuse in the group with confirmed sexual abuse. The extant studies support links between AgPast and a history of having been aggressed against, a masochistic identification, a passive orientation toward aggressive impulses, or ambivalence concerning expressing aggression (aggression turned inward) for non-criminal populations, while for those characterologically predisposed to aggressive behavior (ASPD persons, psychopaths), it can be associated with feelings of entitlement and revenge, for instance, "I've been hurt, I have a right to hurt you" (Gacono & Meloy, 1994).

Aggressive Potential (AgPot). AgPot is coded when an aggressive act is getting ready to occur. Usually, the act is imminent (Gacono, 1988):

Example 1: (Card X; Dd99) "These two are going to give them a surprise. They are waiting to lop their heads off (AgPot). They won't even know what hit them" (Gacono, 1988, pp. 20-21).

Example 2: (Card IV; W) "From the side, oh what was his name? A picture of that Greek God with wings on his feet. These would be black clouds, it all looks like a reflection. (Inquiry) The head on top, the wings. The rest of the figure would be black clouds, and there's trouble brewing in paradise (AgPot). (Clouds?) I can think of nothing else that would go along with the picture, stands to reason, think of a god or goddess being in a cloud. He's flying into clouds. (Reflection?) Same thing someone gets angry, black clouds. I think of danger or anger. I'm a very angry person sometimes" (p.257, Gacono & Meloy, 1994).

Example 3: (Card 1; WS) "A Wylie Coyote in and aggressive mode ..." (Inquiry) "These look like eyes that are hostile, angry, white orbs..." (Hostile?) "Without going into details of cartoons, there is a way of drawing the eyes that looks angry. My first impression was aggression. Wylie E. Coyote about to attack the Roadrunner (AgPot). Yes, there is a large aggressive part of me. He looks like a carnivore ready to strike..." (p. 129, Gacono & Meloy, 1994).

Interpretation. AgPot relates to "sadism" (Meloy & Gacono, 1992), an identification with predatory objects or a preoccupation with predation (Gacono & Meloy, 1994). It occurs more frequently in Cluster B Personality Disorders (Gacono et al., 1992; Baity & Hilsenroth, 1999) than in nonpatients (Margolis, 1992). AgPot has also been found in groups who have difficulties modulating aggressive urges. For example, female offenders with Borderline Personality Disorder (BPD) were approximately 3.5 times more likely to have at least one AgPot response than those without BPD diagnoses (White, 1999). AgPot scores were significantly higher for sexual homicide perpetrators than non-sexually offending psychopaths and nonviolent pedophiles (Huprich et al., 2004). Female psychopaths also produced higher amounts of AgPot than nonpsychopathic incarcerated women (Smith et al., 2020, 2021a, 2021b). Incarcerated criminal debt collectors produced more AgPot than incarcerated homicide offenders and those with histories of less violent crimes (Nørbech et al., 2016).

In a college sample, AgPot correlated with the PAI Aggression Scale and its Physical Aggression Subscale (Morey, 1991), the Borderline Self-Harm Scale (Morey, 1991), and a PAI measure of suicidal ideation with impulsivity (Mihura et al., 2003). AgPot has also been associated with increased White Space responses (S) in undergraduate students (Rosso et al., 2015).

AgPot is most often produced in records containing one or more of the other AgScores. Consequently, for any given protocol, the interpretation of AgPot is greatly enhanced by considering its relationship to the entire aggressive imagery pattern.

Aggressive Vulnerability (AgV). AgV is coded when the person identifies a percept as vulnerable to attack or exploitation or indicates that the object has taken steps to protect itself from predation:

Example 1: (Card V; W) "It's a butterfly and here is where it needs to cover up so the predators can't attack it (AgV)" (Gacono & Meloy, 1994; p. 277).

Example 2: (Card V; W) "A bat, something flying away" (Inquiry) "Same reason. They are shaped like bat wings...Flying wings moving up and down, and animal that is sedentary wouldn't have wings like this unless it was fearful of a predator (AgV)." (p. 131, Gacono & Meloy, 1994).

Through their study of AgV in children and youth in foster care, Joubert and Webster (2017) offered the following thoughts about modifying the AgV criteria:

Implicit perceptions of vulnerability, as in, for instance, percepts that contain any element that can reasonably be associated with both a protective and defensive function (e.g., hard, shell-like surfaces, armor, cloaking devices such as capes, hiding or camouflage). A response such as "one of these horseshoe crabs ... these jagged things here look like their shell" (Card III) would qualify as AgV according to the modified criteria...the slight broadening of the AgV score is intended to bring it conceptually closer to the barrier-penetration system by capturing instances in which the source of aggression is clearly located outside the self (p.4).

While the work of Fisher and Cleveland (1958) provides a direction for expanding the AgV definition, the current barrier and penetration responses are too broad, nonspecific, and overlap with multiple aggressive and nonaggressive categories. Therefore, any expansion of the coding should be linked explicitly to the intent of the AgV coding.

Interpretation. Similar to AgPast, AgV may represent a passive relationship to aggressive impulses. However, unlike AgPast, rather than suggesting a masochistic identification, it

implicates a sensitivity or preoccupation with vulnerability or being exploited, injured, or victimized and suggests an expenditure of psychic energy in protecting oneself.

Joubert and Webster (2017) found that AgV was associated with sexual abuse, neglect, physical abuse, and caregiver-rated conduct problems in a sample of foster care children. These findings are consistent with AgV, indicating a sense of vulnerability and deviance/aggression based on a need for self-protection. Of note was that 10% of female offenders ($N = 232$) and 12% of female psychopaths produced at least one AgV ($N = 115$; Smith et al., 2021b).

While AgV, as currently defined, is rarely produced, when it does appear, its links to feelings of vulnerability and an explicit concern with self-protection are robust.

Sado-Masochism (SM). SM is scored when a response contains devalued, aggressive, or morbid content accompanied by pleasurable affect (Gacono, 1988; Meloy, 1988):

Example 1: (Card VII) “A lady dancing and she got her head blown off (AgPast; laughs, SM).”

Example 2: (Card VI; D1) “Or a file of fish ready to put on a frying pan” (Inquiry) “I’m not seeing the tail...” (Filet?) “...It’s been deboned (AgPast).” (laughs, SM) “Sorry I shouldn’t have said that term...” (Deboned?) “I knew you were going to hit me on that...” (p. 132, Gacono & Meloy, 1994).

Example 3: (Card III; D1) “Okay, A woman that’s had an abortion (AgPast) and she is having difficulty dealing with regrets afterwards (laughs, SM). This is great!” (SM; p. 233, Gacono, 1997).

Pleasurable affect is usually expressed through smiling or laughing, but the examiner should be careful not to interpret anxious behavior as pleasurable affect. Since SM requires observation during the test administration, it can generally be accurately scored from archival protocols only when the examiner recorded the patient's affective expressions; consequently, it has been the second least researched of the aggression scores.

Interpretation. SM has been associated with a sadistic orientation and sadistic impulses. Gacono (1988, 1990) first reported frequencies for SM in groups of psychopathic and nonpsychopathic ASPD offenders. In an expanded sample ($N = 43$), SM differentiated between psychopathic ASPDs ($PCL-R \geq 30$) and non-psychopathic ASPDs (P-ASPDs = 41%; NP-ASPDs = 14%; Meloy & Gacono, 1992). Psychopathic female offenders produce more than nonpsychopathic female offenders (Smith et al., 2020, 2021b).

Sexual homicide perpetrators produce higher frequencies of SM (24%) than nonviolent, non-ASPD pedophiles, none of whom were psychopathic (3%; Huprich et al., 2004). SM also correlated with elevated PCL-R scores and ratings of sexual sadism in an adult rapist sample and PCL-R scores in a sample of incarcerated women (Darcangelo, 1997; Smith et al., 2020). These studies link SM to psychopathy (Meloy & Gacono, 1992; Smith et al., 2020), higher PCL-R scores (Darcangelo, 1997), or sadism (Darcangelo, 1997; Huprich et al., 2004). By contrast, SM responses are unlikely to be produced in the adult female non-forensic sample (Neubauer, 2001).

Based on a review of several hundred offender Rorschach protocols, Gacono offered an expanded coding for SM (Gacono et al., 2008). These responses involve projected sadism, where rather than displaying pleasurable affect, the examinee attributes sadistic attributes to the Rorschach percept (sadistic attribution) or personalizes the sadistic activity (personalized sadism; often coded with a PER). *Sadistic attribution* occurs here, “... he’s smiling like he’s going to hit you (also scored projective identification),” where the percept, rather than the examinee, contains the pleasurable affect. *Personalized sadism* is exemplified by the following response “(Card III) It’s a fly. It’s far out. I’ve been going to mental health counseling since 13 or 16. (Inquiry) A fly,

got big eyes. When I was little, I used to pull flies' eyes off' (Gacono & Meloy, 1994, p. 277). Note how the examinee acknowledges their sadistic behavior during the response process.

This expanded coding likely captures different aspects of a patient's relationship to sadism than the original coding revealing much about their relationship to the impulse (Gacono et al., 2008). However, while empirical links between real-world behavior and the original SM coding have been demonstrated, there has been no research on this expanded coding.

AgC, AgPast, and AgPot combinations. Two studies with college students combined AgC (aggressive identity) with AgPot (aggressive urges) using z-scores. Protocols that contained elevations of both AgPot and AgC versus either of these scores alone were more highly associated with a PAI measure of outwardly expressed aggression. Elevated rates of AgC were associated with viewing a significant other as less controllable when the relationship felt threatened. At the same time, elevated rates of both AgC and AgPot were also associated with viewing others as more controlling. The combination of AgPot (aggressive urges) and AgPast (victimization) scores was more highly associated with a PAI measure of inwardly expressed aggression than either of these scores in isolation (Mihura et al., 2003).

Levy (1998) investigated gender differences for AgC, AgPot, and AgPast in children with severe and chronic physical abuse, hypothesizing that physically abused boys would show higher rates of externalized aggression on the Rorschach than physically abused girls. Consistent with expectations, the physically abused boys had higher levels of AgC and AgPot than did physically abused girls, with no significant differences for AgPast.

AgPot occurs more frequently in sexual homicide perpetrators (compared to nonviolent pedophiles; Huprich et al., 2004), offenders with a BPD diagnosis (White, 1999), female psychopaths (Smith et al., 2020, 2021b), and AgC and AgPot in combination may be better at predicting violent criminal behavior than the Aggression scores solo (Domjan, 2018). Aggressive Potential may represent an identification with predation or the "potential" for acting on aggressive impulses; other variables in the protocol, such as AgC (toward others) or AgPast (toward self), may suggest the direction of the action.

Special Considerations for AgScore Research

Conscious Censoring. Research has consistently supported the relationship between the lower frequencies of AGM in CD and ASPD populations and the ego-syntonic nature of aggression in CD, ASPD, or psychopathic individuals. Patients can and do censor responses to any test, including the Rorschach. Response style (Bannatyne et al., 1999; Gacono & Gacono, 2008) and the assessment context must be considered when suspecting censoring or malingering (Gacono et al., 2002; Ganellan, 2008). For the original Gacono (1988, 1990) studies with ASPD individuals and later ones containing mostly adjudicated subjects (Gacono & Meloy, 1992, 1994; Gacono & Evans, 2008; Smith et al., 2021b), however, there is no empirical evidence to support censoring of AGM.

One study purported to evaluate conscious censoring related to aggressive imagery (Benjestorf et al., 2013). The study, however, failed to incorporate an adequate methodology for assessing the relationship between AGM and censoring in forensic populations. Nevertheless, since the study is illustrative of common issues that impact AgScore research, we review it here:

- 1) *Group determination was determined* "by participant self-report during the screening phone call" (p. 2986). When studying these groups, documented historical information is essential, and third-party validation of information is preferred over accepting self-report. Therefore, a telephone self-report interview, which introduces multiple

confounds, including impression management and outright lying, is insufficient for an adequate research design.

- 2) *Participants were paid* (“US\$30.00 or four free movie passes at the completion of the study” [p. 2986]). Paying participants to appear “as if” works for most any Rorschach variable. However, this method does not address whether conscious censoring was present in establishing any of the reported forensic samples (Gacono & Evans, 2008).
- 3) *Several inaccuracies were offered in the study.*
 - a. “However, results associated with Rorschach Aggressive scores with violent offenders have been mixed” (p. 2983). This statement is followed by three references, two of which studied student samples, not violent offenders. When populations are similar (college, offender), findings have also been complementary and consistent with theoretical differences. In well-designed studies, findings *have not been mixed*.
 - b. “However the results of the present study are also in contrast to previous research that found violent males produced fewer aggression responses than less-or nonviolent participants (Gacono, 1988, 1990; Gacono & Meloy, 1992; Heaven, 1989; Kaser-Boyd, 1993)” (p. 2996). In the majority of these studies, psychopaths and non-psychopaths were compared (both aggressive groups, not violent and nonviolent males); the history of violence was not an independent measure. Also, more, not less, of the Gacono and Meloy AgScores were produced by these offenders compared to nonpatients and other groups. Only AGM has been produced less frequently.
 - c. AgScores (specifically AgC & AGM) were combined when discussing research focused on the low production of AGM in forensic samples. “Previous research has focused on AG and AgC as primary variables as of interest, as we will do in this study, but AgPast, AgPot and the sum of these four variables will also be examined” (p. 2985). AGM and only AGM are not symbolized on the Rorschach for these samples (Gacono & Meloy, 1994), not AgC. Findings with antisocial and psychopathic offenders reveal a plethora of the other Extended Aggression Scores in average Lambda samples.
 - d. “It is possible that violent offenders have been typically been tested in highly suppressive conditions ... If so, aggressive score differences may be a reflection of the testing condition, not group differences” (p. 2981). These Gacono and Meloy samples were not tested in highly suppressive conditions (so this was not possible). Instead, these were primarily adjudicated offenders absent an overt reward for censoring. Again, why would these offenders brag about violent acts and then censor AGM on the Rorschach? Why would they selectively censor AGM while producing a plethora of Extended AgScores?

While censoring can occur and should be considered when conducting forensic evaluations or wherever there may be rewards for impression management, there is no indication that this was the case in the Gacono and Meloy samples (Gacono & Evans, 2008).

Interpretations Vary Depending on the Level of Personality Organization. The interpretation of any Rorschach Aggressive score must consider the relationship of the patient’s level of personality organization (Kernberg, 1967) as grossly represented by nonpatient and normal groups versus forensic and characterological groups. Nonpatient and normal (neurotic) groups are

more likely to contain individuals that are not borderline or psychotic than clinically determined characterological and psychotic subjects.

For example, the presence of AgC in specific college student samples, absent a history of violence, is associated with the disruptive impact of aggressive impulses rather than identifications. It may represent an inner psychic irritant that coincides with feelings of less control and the need to modulate the impulse through projection. By contrast, in forensic populations, AgC correlations with the number of ASPD criteria, scores on the Antisocial Practices Scale (MMPI-2), and institutional chart ratings of aggressive behavior indicate aggressive identifications and preoccupations are present (Gacono & Meloy, 1994).

Additionally, findings with college samples (likely nonpatient, normal, neurotic), absent any history of violence, should not be treated as equivalent to those from offender populations where borderline and psychotic personality organization and violent behavior are the norms. As exemplified in the conclusions of two recent articles (Benjestorf et al., 2013; de Ruiter, 2021), discrepant findings from these differing samples should not automatically be construed as providing conflicting results or inconclusive findings when the composition of the samples would predict group differences discovered. The presentation of findings that contain this Type I error are what Gacono termed *counterintuitive findings* (Gacono, 2019).

A Conceptually Valid Rationale Must Inform the Prediction of Group Differences. In offender samples, caution should be exercised if chart-reported offense histories are used as the sole basis for forming aggressive versus nonaggressive groups. First, it is not uncommon for violent offenders to have an absence of formal charges or convictions (arrestable offenses) in their records. Secondly, plea bargaining can result in convictions different from actual charges. Finally, any particular offense category may capture various motivations and behaviors. Except for extreme behavior such as sexual homicide, with its very low base rate of occurrence, researchers must carefully consider the limitations of using "rap sheets" alone to quantify levels of aggression. A similar caution might be offered when self-reports are utilized rather than actual behavior (Kivisto & Swan, 2013).

A Type I error also occurs when differences are predicted between two heterogeneous but similar groups. For example, due to the heterogeneous nature of the ASPD diagnosis, differences between a group of ASPD offenders and a group of control offenders may be minimal. Therefore, rather than using ASPD as an independent measure, the appropriate comparison involves PCL-R identified psychopaths and low PCL-R offenders (Gacono, 2016; Gacono et al., 2001; Smith et al., 2021b). Similarly, a form of Type I error occurs when expecting similar findings between or using the same AgScore interpretations for two groups with dissimilar personality organizations, such as offenders and college students.

When interpreting findings within and between studies, one must first consider if there was a carefully considered and valid theoretical rationale and evaluate whether the proposed or established clinical meaning of the variables was accurately reflected in the study's hypothesis (Gacono et al., 2001; Gacono & Meloy, 1994). Evaluating this latter point requires a sophisticated understanding of violent offenders and how the Rorschach actually works.

High Lambda Samples. High Lambda forensic samples represent a significant concern when evaluating frequencies or proportions of any Rorschach content-based item (Gacono, 2019). Any comparison of content-based items' means and frequencies with more normally distributed Lambda samples must be made with caution. Lambda is a straightforward computation, $L = F / (R - F)$. By definition, the more pure F in the record relative to R, the higher the Lambda (fewer determinants other than Pure F). Constricted protocols (high Lambda and low R) are consistent

with certain forensic patients, where inadequacy and limited psychological resources exist (Bannatyne et al., 1999; Gacono & Gacono, 2008; Young et al., 2008). The corresponding reduction in content-based items means and frequencies limit direct comparisons to normally distributed Lambda samples. Issues related to Rorschach administration, scoring, and sample characteristics (Lambda, R) must always be considered when evaluating the validity of a study's findings.

Considering the range for R may be important for AgC. It occurs frequently enough that comparing AgC score proportions, means, or participants who produce ≥ 3 may be predictive and more useful than comparing frequencies of individuals who produce at least one.⁴

Two final errors involved inappropriate statistical procedures with categorical data, the failure to report interrater agreements for the Extended Aggression Scores, level of aggression measure, diagnosis, and so forth.

Conclusion

Unlike problematic research designs (i.e., attempting to study psychopathy in college samples where there are no psychopaths; Gacono, 2016), exploring the validity of aggression scores has value in both violent (clinical) and nonviolent samples (nonpatients, absence of a history of aggressive behavior). Aggressive impulses and drive are present in all personalities, regardless of one's behavioral history or the presence or absence of psychopathology. The clinical task becomes one of determining its nature, preponderance, and how successfully it is modulated, sublimated, or integrated. Specifically, how does it impact one's personality, and what are the behavioral outcomes of the aggressive drive? One, however, should expect findings consistent with real and theoretical differences in these populations.

While all of the specific aggressive indices (AGM; Gacono & Meloy scores) can use additional validity research, SM and AgV particularly need further study. Perhaps, expanded definitions can increase their usefulness without sacrificing their validity. Validation studies that assess the best cut-off scores for prediction and link the scores to real-world aggressive behaviors (e.g., AgPot, Smith, et al., 2021a) are preferred over those that correlate the indices with self-report measures. When the clinician is tasked with evaluating a patient's aggressivity, an analysis of their Rorschach aggressive imagery is necessary but insufficient. In Part II of this series, we discuss the contribution of the Rorschach to this assessment.

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⁴ Compared to the mean R for nonpatient adults ($M = 22.32$; $SD = 4.40$; CS, Exner, 2001), the mean R for most criminal samples is lower ($M \approx 17-19$), while the mean R is *higher* for sex offender groups ($M \approx 26-29$). Lambda, R, administration errors, qualities within the population studied (relationship to aggressive impulse), and so forth may all contribute to differences that are counter to true findings.

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